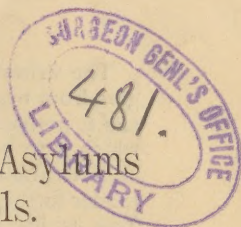


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Contagious Ophthalmia in Asylums and Residential Schools.

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BEFORE asking the attention of the Academy to a paper of some length on the subject of "Contagious Ophthalmia in our Asylums and Residential Schools," the writer desires to state that the interest attaching to this subject is not of a purely scientific nature, but appeals to the hearer on the threefold ground of philanthropy, medicine, and social science. The writer also holds that no one familiar with the subject will deny that contagious ophthalmia is a disease as dangerous to sight as scarlet fever and typhus and other contagious diseases are to life and health, and that the welfare of those who have been adopted by our public institutions, and for whom we are in great measure responsible, demands some system of quarantine or medical supervision which shall not only insure recovery to those already afflicted, but which shall afford ample protection to those who have thus far escaped contagion.

There is probably no gentleman here present who has given particular attention to diseases of the eye, who will not bear witness to the fact that any child who is an inmate of our public institutions, is far more likely to lose his sight from the inroads of contagious ophthalmia than to lose his life from scarlet fever or any of the diseases which are subject to quarantine regulations by the Board of Health.

The writer would further state that, whereas the dangers from neglect are comparatively great, the disease itself is perfectly amenable to treatment, and the reward which is to be expected from an *adequate* appreciation of, and attention to, the exigencies of the case is such as to render further neglect of the subject entirely inexcusable. This is his apology, if apology is necessary, for asking his hearers to follow him in the exhibition of statistics which, on a more trivial subject, would be considered dry and uninteresting.

In October, 1884, the writer of this paper prepared, for the Committee on Hygiene of the County Medical Society, a report on "Contagious Ophthalmia" in three of the asylums of this city. Since that time many other institutions have been visited and the inmates examined, and we are now able to present a summary of results obtained from the examination of seven thousand four hundred and forty children, the entire number contained in twenty-four orphan asylums and residential schools of this city. Before detailing the results of these investigations, a brief description of the disease we are considering may be permitted. Blenorrhoeic conjunctivitis in its chronic form is characterized by injection of the conjunctiva of the eyelids, hypertrophy of the papillary bodies, and secretion of a purulent or a muco-purulent nature. The conjunctiva tarsi of the fold of transmission, the semilunar fold, are in general the seat of the disease, while the conjunctiva of the eyeball may, and generally does, in the earlier stages of the disease, escape.¹

The secretion is contagious. At an early period of the affection the meibomean glands are no longer to be seen upon eversion of the lids; later on, the swelling of the semilunar fold increases, as does that of the fold of transmission; the inner canthus ceases to be sharply defined; the tear-points are disturbed in their position, and the passage of the tears interfered with. If the dis-

¹ Graefe und Saemisch, Band IV., pp. 76 to 79.

ease progresses, the conjunctiva of sclera participates in the affection ; it becomes injected and shows serous infiltration, and at a later period these symptoms are intensified ; the ocular conjunctiva becomes swollen ; the lids can with difficulty be everted ; there is chemosis ; the cornea is now in danger. Pressure of the swollen lids and of the chemosis upon its nutritive supply, lead to ulceration upon its surface, and unless relief in some way is found, perforation of the cornea and consequent prolapse of the iris may ensue.

Blenorrhoeic conjunctivitis in a vast number of cases remains an affection of the conjunctiva of the lids, and does not advance to the later stage which we just briefly described.

It passes for a catarrhal affection of the eyes, and as such is treated ; or it exists, and this is often the case, without receiving any medical attention whatever. We have spoken of the secretion from a blenorrhoeic conjunctiva as contagious ; it may be transferred from eye to eye by means of a towel ; it may be conveyed in the water used for washing ; the atmosphere itself may be the bearer of the contagion.

Among soldiers in their barracks, in the crowded holds of vessels, in the over-filled homes of the poor, among the inmates of large institutions, contagious ophthalmia has been found, and as our investigations will show, an especially fertile field for this disease, so full of danger to the eyes, exists in the orphan asylums of a great city.

In an experience of fourteen years as officer of one of the largest ophthalmic hospitals of the county, the writer has over and over again had children brought to him from some of our city institutions with their sight irreparably damaged, and with the sad statement, doubtless true, that before they were taken from their homes their eyes were perfectly sound. It was with a view of seeing how far this malady might exist among the children cared for in the asylums of this city that the investigations now detailed were made.

The first asylum visited stands on one of the broad avenues of the city, on high ground. The children were examined in their class-rooms, and subsequently their dormitories and lavatories were visited. Among the boys, of whom there were 326 present, were found 96 cases of contagious ophthalmia; among the girls were 65 cases out of an attendance of 331, making a total percentage of 24.5. In almost all the cases here found the disease was in what we have described as the first stadium. In many cases the appearance of the eyes before eversion of the lids betrayed no sign of the malady which was present. In certain cases, the child or its attendant remarked that it had from time to time a cold in its eyes, nothing more. Occasionally, where the blenorrhoeic process was most strongly marked, neither child nor attendant seemed aware that anything was wrong. In the dormitories each child had its own bed; in the wash-room, separate towels hung upon numbered hooks, and no basin was used; small jets of water at intervals of a foot along a horizontal pipe placed above the sink, furnished each child with its supply for washing. In the boys' asylum a large sunken tub, perhaps ten feet long, was prepared for the bath, and in this eight children or more at a time were bathed. (Eight years ago I visited this same institution with the late Mr. Theodore Roosevelt. The object of the visit was to ascertain to what extent contagious ophthalmia then existed among the inmates. The notes of that examination were not preserved, but a large number of children were found then to have sore eyes. In the lavatories were a few roller-towels hanging on the wall, and these were used by the children indiscriminately, those that had eye trouble and those that were well. It was in consequence of representations we then made that the children were thereafter supplied each with its own towel.)

The next asylum, which we may designate as No. 2, showed among 1,586 inmates, 488 cases, or 30.7 per cent. of contagious ophthalmia.

In No. 3 were 782 inmates ; of these 111 had sore eyes, or 14.2 per cent. In the lavatories hung on the walls twenty-five roller-towels, and these the attendant said were changed two or three times per week.

In No. 4 were 188 children, and of these 93 or 49.4 per cent. had sore eyes. In reference to the condition of things at this asylum, I make the following extract from a letter received May 27, 1885, from the physician in attendance : "When you made an official visit to our institution, in 1884, you found 92 children suffering from a contagious type of ophthalmia. . . . At your suggestion the sore-eyed children were separated from the others, and subjected to a daily course of treatment for a period of five months, the present time of writing. I give the result—42 of the 92 are cured. Fifty of the whole number in the institution are still under treatment. . . . Two children never occupy the same bed ; a towel and brush is supplied to each individual. The bathing facilities are of the best, the grounds are ample, and the children have an abundance of out-door life. The dietary is excellent, and in a family of 200 it is but seldom that a child is so ill as to require the aid of a physician."

In asylum No. 5 were 740 inmates, and among them 71 cases, or 9.5 per cent. Here we found two large rooms, with two immense bath-tubs in each, about which 260 boys stand twice or three times a day and wash at a spigot, and then go irregularly to one of the sixty roller-towels that hang on the walls of each room.

In asylum No. 6, out of 96 inmates were 26 cases, or nearly thirty-seven per cent.

In No. 7 were 15 cases among 262, or 5.7 per cent.

In No. 8 were 455 children, and of these 74 had sore eyes, or 16.2 per cent.

In No. 9, out of 155 children, 5 were affected, or 3.2 per cent. ; each child was supplied with its towel.

In No. 10 were 240 children ; there were 15 cases of sore eyes, or 6 per cent. These children were for the

most part committed by the courts ; each child had its own box containing towel and brush.

In No. 11 were 21 children, and no case of granular ophthalmia.

In asylum No. 12 were several buildings. In the first one visited I found 80 boys, from four to eight years of age. There were 47 cases of contagious eye-trouble. The cases were mostly severe, with free secretion. Of 164 girls there were 80 cases of similar type. Louisa M——, aged four years, came to me the day before, at the New York Eye and Ear Infirmary, with left eye in condition of central corneal perforation and extensive prolapse and acute granular ophthalmia. The mother said the child had gone into the asylum with good eyes, and had been there one year. The sisters in charge of the asylum remembered the case, and said they had sent the child out to have her eye operated (*sic*). The eye was beyond hope. Of 178 boys there were 56 cases ; of 29 infants under three years of age there were 21 cases. With these last the practice of the attendants was to use two towels, one for the sick, the other for the well eyes. In the case of the older children, each had its numbered towel. To summarize : among 451 children were 204 cases of contagious ophthalmia, or 45 per cent. There was every evidence of over-crowding in this asylum ; no plan had been, or apparently could be, adopted for isolating such children as suffered from this grave disease. The sisters in charge stated that they must receive all the children that were sent to them, whether they had sore eyes or not, as they were for the most part commitments. The general physique of the inmates was not good, and the evidence their evening meal gave of the dietary was not encouraging.

In marked contrast to this was asylum No. 13. The fine physical condition of all the children was noticeable. Each child had its own brush, comb, tooth-brush, and towel. The towels were changed twice every week. Of 104 inmates there were 6 cases, or 5.7 per cent.

In No. 14 were 310 boys, and of these there were 73 cases, or 23.5 per cent. The large building in which these boys were cared for furnished each child with a small wire-screened compartment, in which stood his bed and wash-stand. In the infirmary were 14 children, all with recognized sore eyes, but the 50 and more cases found among the larger boys had received no attention, so far as inquiry among the boys and their attendants showed, from the medical officer of the asylum.

In No. 15 the children were found distributed in cottages, each child with its own towel, brush, etc.; of 151 children there was 1 case, or less than one per cent.

In No. 16 the children were arranged as in No. 15. Here was 1 case among 122 children, or .08 per cent.

In No. 17, the asylum a large and spacious new building, the children were well cared for. Among 399 children were 7 cases, or 1.7 per cent.

No. 18 contained 245 children, and among them were 40 cases of contagious ophthalmia, or 16 per cent. In the nursery department were half a dozen towels used at the discretion of the attendants. In the wash-rooms for the older children hung numbered towels.

In No. 19 were 98 children and young women, and among them were 2 cases of contagious ophthalmia, or about two per cent. The dormitories were spacious, well ventilated, and each inmate had its own towel.

In No. 20 were 124 girls, and among them 6 cases, or 4.8 per cent. Each child had its own numbered towel.

In No. 21 were 132 girls, and among them 21 cases, or 15.9 per cent. The school-rooms and dormitories were dark and badly ventilated. Each child was provided with its own towel.

In No. 22 were 18 girls between the ages of six and thirteen. In No. 23 were 22 young women. In neither asylum were any cases. Both of these asylums were in private hands, and the inmates cared for in commodious houses.

In No. 24 were 82 children, and among them 8 cases, or 10 per cent.

The communicable eye-diseases observed in these investigations have been designated under the general term of contagious ophthalmia. Among them were those where the true granulations, the so-called trachoma of Arlt, were present ; others that might be more properly described as chronic conjunctival blenorrhœa. In some the affection had extended to the cornea, producing pannus, and in certain cases corneal ulceration had been followed by prolapse of the iris and adhesion. In striking illustration of the communicability of the disease, it was often noticed that when a pronounced case was found, a group of children presented themselves in succession with the same trouble, and these were children who habitually in the class-room occupied adjacent seats.

It is not the purpose of this paper to consider in detail the various causes which lead to the development of contagious eye-diseases in the asylums which have been visited. The part played by imperfect quarantine, bad lavatories, overcrowding, bad hygiene—all this has been discussed in other places.¹

My purpose in these investigations will have been attained if I have drawn attention to the fact that in the asylums of our city, where children in large numbers are housed, and where the inmates are taken from the overcrowded, illy ventilated, unhealthful homes of the poor, there exists to an alarming extent a disease fraught with danger to the eyes of all assembled there. We have seen that this affection may be present without attracting the attention of the lay attendants of the children, and without calling for or receiving the care of the visiting physician of the institution. In certain cases, it is true, if the subject is well nourished, and the hygienic surroundings good, the eye-trouble disappears without treatment. In too many cases, however, the disease, which has once established itself, goes on insidiously undermining the health of the eyes, and there comes a period when the affection

¹ State Board of Health of New York, No. 44.

is acute, and we hear of an epidemic of contagious ophthalmia. Fortunate, then, are the unhappy inmates of such an institution, if many eyes are not lost before the disease can be controlled. The statistics taken from these asylums are appalling enough. We have found among 7,440 children that 1,428, or 19.19 per cent., nearly one out of every five, had communicable eye-disease, which he was liable to transfer to his neighbor. Nor does the trouble cease here, as has been observed in several of the institutions we have visited. So soon as an unusual number of children are found to suffer from sore eyes, it is not an uncommon practice for those who have the children in charge to send back to their former homes the worst cases, with the statement that it is better that, until the child recovers, treatment should be procured outside of the institution; only those who are familiar with the homes of the poor in a great city can appreciate what a hardship is now wrought upon the unhappy guardians of such children. It is impossible that a child afflicted with contagious eye-disease should receive in its tenement-house home adequate treatment. This class of cases is often refused shelter in our best equipped eye infirmaries. The child must be brought three times, at least, in the week to the clinic for out-door patients. The already overtaxed parent must see to it that this frequent attendance is not neglected. The child becomes a fresh centre of contagium in the crowded, illy-cared-for home, where the food-supply is scanty and the simplest rules of hygiene are neglected. The case must often be neglected, and neglect means advance of the morbid process, permanent, irreparable damage to the eyes.

Were there time in this report, it would be proper to show how, by reason of a *per capita* allowance from city or State, it is in many of the institutions a pecuniary advantage to the asylum itself to receive as many children as possible within its walls, and overcrowding is thus directly encouraged. In many asylums children are com-

mitted by the civil authorities, and in others by charitable societies, whose object is the protection of their charges from cruelty at the hands of their natural guardians. Can a more refined cruelty be imagined than one which subjects a child with healthy eyes to the dangers which every epidemic of contagious ophthalmia carries with it?

This present report covers but a portion of the asylums of this great city. There are many others that we have not visited which would doubtless contribute their considerable quota of cases of communicable ophthalmia.

To meet this evil, certain conclusions force themselves upon us.

Under no circumstances should children be received in an asylum until a competent authority has pronounced the eyes of the new-comers free from any trouble of a contagious character. Every asylum and residential school of the city should be called on to furnish to the Board of Health a statement certified to by its attending physician, of the number of cases of contagious eye-disease at present within its walls. These cases should be separated from the other inmates of the asylum, and this quarantine should be rigidly enforced so long as a single case of this disease is observed. Adequate treatment must be supplied—not merely local treatment for the eyes, but such allowance of food and air as are necessary for the proper treatment of such cases.

No less precaution for the safety of other inmates of these institutions should be taken where contagious ophthalmia is found to exist than is now observed when a case of scarlet fever is recognized.

It is impossible to read the statistics which have been presented in this paper without acknowledging the fact that a great evil calls urgently for prompt and systematic action for its relief. What shall be done, and where shall the beginning be made? Our present inquiries have brought to our knowledge enough cases of contagious

eye-disease to more than fill a large hospital devoted to this particular class of diseases. If such a hospital existed, it would undoubtedly soon reduce the percentage of such troubles to a minimum. Such a hospital would receive and care for all cases of communicable eye-disease until they could be returned cured to the institutions from which they were gathered. While we may not ourselves establish and maintain such a hospital, it behooves us as members of the Academy to make emphatic protest against the continuance of the present dangerous and inhuman practices which we have found at many of our city's institutions. Hoping that the members of the Academy here present will deem this matter worthy of their serious attention, I take pleasure in submitting it to their consideration.

